AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (Withdrawn) An electrode comprising:

a) an electrode substrate;

b) an active material;

c) a conductive material; and

d) a polyelectrolyte which attaches the active material and conductive material to the electrode substrate.

2. (Withdrawn) The electrode according to Claim 1, wherein the polyelectrolyte is at least one polymer material selected from the group consisting of:

i) water-soluble polymer;

ii) cationically charged polyelectrolyte;

iii) uncharged water-soluble macromolecule; and

iv) anionically charged high molecular weight material.

3. (Withdrawn) The electrode according to Claim 2, wherein:

i) the water-soluble polymer is at least one selected from the group consisting of gelatin, polyacrylates carrying a certain number of ammonium groups, and albumins;

ii) the cationically charged polyelectrolyte is at least one selected from the group consisting of copolymers of acrylamides or methacrylamides with salts, and quaternary products of aminoacrylates or other polyelectrolytes carrying simple or substituted ammonium groups;

iii) the uncharged water-soluble macromolecule is at least one selected from the group consisting of polyacrylamides, polyvinylpyrrolidones, polyvinylalcohols, polyethylene glycols, polyethylene glycol ether, epichlorohydrin-imidazole adduct, polyvinyl imidazoles,

polysaccarides selected from the group consisting of agar, starch, pectin, and dextran, and sugar polymer such as alginic acid; and

iv) the anionically charged high molecular weight material is at least one selected from the group consisting of sodium salts of carboxymethylcellulose, sodium salts of alginic acid, a copolymer of mannuronic acid and glucuronic acid, alkali salts of polycarboxylic acid such as polyacrylic acid, and polyvinylphosphoric acid.

4. (Withdrawn) The electrode according to Claim 1, wherein the electrode comprises an active material layer and a conductive material layer attached to the surface of the electrode substrate by the polyelectrolyte, and the electrode is of the form where the active material layer and the conductive material layer is arranged alternately at one or more times.

5. (Withdrawn) The electrode according to Claim 4, wherein the active material layer has a thickness of 10 nm to 10 μm and the conductive material layer has a thickness of 10 nm to 5 μm.

6. (Withdrawn) The electrode according to Claim 1, wherein the electrode comprises a composite layer of active material and conductive material attached to the surface of the electrode substrate by the polyelectrolyte.

7. (Withdrawn) The electrode according to Claim 6, wherein the composite layer has a thickness of 10 nm to 10 μm.

8. (Withdrawn) The electrode according to Claim 1, wherein the electrode substrate is a current collector which comprises at least one selected from the group consisting of stainless steel, copper, titan, aluminum, and ITO.

9. (Withdrawn) The electrode according to Claim 1, wherein the active material is at least one selected from the group consisting of lithium titanate ($Li_4Ti_5O_{12}$) lithium cobaltate, and lithium manganate.

10. (Withdrawn) The electrode according to Claim 1, wherein the conductive material is at least one selected from the group consisting of carbon black and activated carbon.

11. (Withdrawn) The electrode according to Claim 1, wherein the electrode is used in a battery, a supercapacitor, or a fuel cell.

12. (Withdrawn) The electrode according to Claim 1, wherein the electrode is prepared by a substrate induced coagulation (SIC) coating method.

13. (Currently amended) A method of preparing an electrode which comprises a step of preparing a layer of active material, a layer of conductive material, or a composite layer including an active material and a conductive material onto the surface of ~~the~~ an electrode substrate using ~~the SIC~~ a substrate induced coagulation (SIC) coating method.

14. (Currently amended) The method of preparing an electrode according to Claim 13, wherein the electrode substrate is at least one selected from the group consisting of stainless steel, copper, titanium, aluminum, and ITO.

15. (Original) The method of preparing an electrode according to Claim 13, wherein the active material is at least one selected from the group consisting of lithium titanate, lithium cobaltate, and lithium manganate.

16. (Original) The method of preparing an electrode according to Claim 13, wherein the conductive material is at least one selected from the group consisting of carbon black and activated carbon.

17. (Original) The method of preparing an electrode according to Claim 13, wherein the SIC coating method comprises the steps of:

a) conditioning the surface of the electrode substrate with a conditioning solution comprising a first solvent and a polyelectrolyte; and

b) treating the conditioned surface of the electrode substrate with:

i) an active material, conductive material, or their mixture ;

ii) a second solvent;

iii) a surfactant ; and

iv) a dispersion containing an electrolyte.

18. (Original) The method of preparing an electrode according to Claim 17, wherein the polyelectrolyte is at least one polymer substance selected from the group consisting of:

i) water-soluble polymer;

ii) cationically charged polyelectrolyte;

iii) uncharged water-soluble macromolecule; and

iv) anionically charged high molecular weight material.

19. (Original) The method of preparing an electrode according to Claim 17, wherein:

i) the water-soluble polymer is at least one selected from the group consisting of gelatin, polyacrylates carrying a certain number of ammonium groups, and albumins;

ii) the cationically charged polyelectrolyte is at least one selected from the group consisting of copolymers of acrylamides or methacrylamides with salts, and quaternary products of aminoacrylates or other polyelectrolytes carrying simple or substituted ammonium groups;

iii) the uncharged water-soluble macromolecule is at least one selected from the group consisting of polyacrylamides, polyvinylpyrrolidones, polyvinylalcohols, polyethylene glycols, polyethylene glycol ether, epichlorohydrin-imidazole adduct, polyvinyl imidazoles, polysaccarides selected from the group consisting of agar, starch, pectin, and dextran, and sugar polymer such as alginic acid; and

iv) the anionically charged high molecular weight material is at least one selected from the group consisting of sodium salts of carboxymethylcellulose, sodium salts of alginic acid, a copolymer of mannuronic acid and glucuronic acid, alkali salts of polycarboxylic acid such as polyacrylic acid, and polyvinylphosphoric acid.

20. (Original) The method of preparing an electrode according to Claim 17, wherein the conditioning solution comprises 0.001 to 10 (w/w)% of the polyelectrolyte.

21. (Original) The method of preparing an electrode according to Claim 17, wherein the dispersion comprises 0.05 g/L to 10 g/L of active material, conductive material, or a composite of these, 10 mM/L to 100 mM/L of surfactant, and 0.01 mole/L to 0.1 mole/L of electrolyte.

22. (Original) The method of preparing an electrode according to Claim 13, wherein the electrode is used in a battery, a supercapacitor, or a fuel cell.

23. (New) The method of preparing an electrode according to Claim 13, wherein the electrode comprises an active material layer and a conductive material layer attached to the surface of the electrode substrate by the polyelectrolyte, and the electrode is of the form where the active material layer and the conductive material layer are alternately arranged one or more times.

24. (New) The method of preparing an electrode according to Claim 13, wherein 5 the active material layer has a thickness of 10 nm to 10 μm and the conductive material layer has a thickness of 10 nm to 5 μm.

25. (New) The method of preparing an electrode according to Claim 13, wherein the electrode comprises a composite layer of active material and conductive 10 material attached to the surface of the electrode substrate by the polyelectrolyte, and the composite layer has a thickness of 10 nm to 10 μm.